

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims in accordance with the following:

1. (CURRENTLY AMENDED) An information reproducing apparatus using an operating system, comprising:

a hardware secure module having a tamper resistant module structure inaccessible from outside that stores information related to secure software;

a memory that stores the secure software;

a storing unit that is loaded on the hardware secure module and stores an updated secure software in an unswappable area of the memory using a direct access method;

a falsification checking unit that is loaded on the hardware secure module, wherein the falsification checking unit reads the secure software from the memory by direct access without using the operating system, compares the read secure software with the information related to the secure software stored in the hardware secure module, and checks whether the secure software is falsified based on a result of the comparison; and

a processor that executes the secure software when a result of the check by the falsification checking unit is that the secure software is not falsified, and

wherein the storing unit instructs, using the direct access method, the processor to change over from the secure software executed to the updated secure software stored in the unswappable area of the memory and to execute the updated secure software.

2. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 1, wherein the falsification checking unit reads all of the secure software.

3. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 1, wherein the falsification checking unit reads a part of the secure software.

4. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 1, wherein the falsification checking unit performs the comparison of the information and the secure software using a checksum method.

5. (CANCELLED)

6. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 1, wherein the falsification checking unit reads the secure software from the memory on an irregular basis.

7. (CURRENTLY AMENDED) The information reproducing apparatus according to claim 1,~~further comprising wherein:~~

~~[[a]]the~~ storing unit that is loaded on the hardware secure module and that updates the secure software in the memory using ~~[[a]]the~~ direct access method.

8. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 7, wherein the storing unit updates the secure software on an irregular basis.

9. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 7, wherein the storing unit updates a part of the secure software.

10. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 7, wherein the falsification checking unit reads the secure software updated by the storing unit.

11. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 7, wherein when the secure software is updated, the storing unit changes over the secure software which has been updated.

12. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 7, wherein the storing unit stores encrypted data in the memory after encryption using a key that exists in the hardware secure module.

13. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 1, further comprising:

a key managing unit that is loaded in the hardware secure module, wherein the key managing unit holds a key used to encrypt or decode data stored in the memory, and the key managing unit outputs the key, if the falsification checking unit does not detect a falsification.

14. (ORIGINAL) The information reproducing apparatus according to claim 13, wherein the key supplied by the key managing unit is valid only for a predefined period of time.

15. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 13, wherein the key managing unit changes the key each time the key managing unit outputs the key.

16. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 13, wherein when the falsification checking unit detects a falsification, the key managing unit does not output the key.

17. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 1, further comprising:

a writing unit that is loaded in the hardware secure module, wherein the writing unit writes a secret information within the hardware secure module into the memory using the direct access method, wherein

the falsification checking unit checks falsification of the secure software based on response information corresponding to the secret information.

18. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 17, wherein the secret information is stored in a controlled memory space, wherein

the controlled memory space is such that a correct information is read out from the memory space at a first time and an incorrect information is read out at a second time.

19. (PREVIOUSLY PRESENTED) The information reproducing apparatus according to claim 1, wherein the secure software has a function of decoding encrypted MPEG data.

20. (CURRENTLY AMENDED) An information reproducing method using an operating system, comprising:

reading a secure software stored in a memory using direct access method without using the operating system, by a hardware secure module having a tamper resistant module structure inaccessible from outside which stores information related to the secure software;

storing an updated secure software in an unswappable area of the memory using a direct access method;

checking falsification by a falsification checking unit that is loaded on the hardware secure module, by comparing the secure software read at the reading with the information related to the secure software stored in the hardware module,and;

determining whether the secure software is falsified based on a result of the comparison; and

executing the secure software by a processor when a result of determining is that the secure software is not falsified,and

wherein the storing includes instructing, using the direct access method, the processor to change over from the secure software executed to the undated secure software stored in the unswappable area of the memory and to execute the updated secure software.

21. (CURRENTLY AMENDED) A hardware secure module mounted to an information reproducing apparatus, comprising:

a reading unit that reads a secure software from a memory mounted to the information reproducing apparatus by direct access without using an operating system; and

a storing unit that stores an updated secure software in an unswappable area of the memory using a direct access method;

a falsification checking unit that compares the secure software read at the reading with information related to the secure software stored in the hardware secure module, and checks a falsification of the secure software based on a result of the comparison, and

wherein the hardware secure module has a tamper resistant module structure inaccessible from outside and when the result of the comparison shows that the secure software is not falsified, the secure software is executed by the information reproducing apparatus,and

wherein the storing unit instructs, using the direct access method, the information reproducing apparatus to change over from the secure software executed to the updated secure software stored in the unswappable area of the memory and to execute the updated secure

software.

22. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 21, wherein the reading unit reads all of the secure software.

23. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 21, wherein the reading unit reads a part of the secure software.

24. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 21, wherein the falsification checking unit performs the comparison of the information and the secure software using a checksum method.

25. (CANCELLED)

26. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 21, wherein the reading unit reads the secure software from the memory on an irregular basis.

27. (CURRENTLY AMENDED) The hardware secure module according to claim 21, ~~further comprising wherein:~~

a storing unit that stores the secure software in the memory using [[a]]~~the~~ direct access method.

28. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 27, wherein the storing unit updates the secure software on an irregular basis.

29. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 27, wherein the storing unit updates a part of the secure software.

30. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 27, wherein the falsification checking unit reads the secure software updated by the storing unit.

31. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 27, wherein when the secure software is updated, the storing unit changes over the secure software

which has been updated.

32. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 27, wherein the storing unit stores encrypted data in the memory after encryption using a key that exists in the secure module.

33. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 21, further comprising:

a key managing unit that holds a key used to encrypt or decode data stored in the memory, and the key managing unit outputs the key, if the falsification checking unit does not detect a falsification.

34. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 33, wherein the key supplied by the key managing unit is valid only for a predefined period of time.

35. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 33, wherein the key managing unit changes the key each time the key managing unit outputs the key.

36. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 33, wherein when the falsification checking unit detects a falsification, the key managing unit does not output the key.

37. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 21, further comprising:

a writing unit that writes a secret information within the secure module into the memory using the direct access method, wherein

the falsification checking unit determines falsification of the secure software based on response information corresponding to the secret information.

38. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 37, wherein the secret information is stored in a controlled memory space, wherein the controlled memory space is such that a correct information is read out from the memory space at a first

time and an incorrect information is read out at a second time.

39. (PREVIOUSLY PRESENTED) The hardware secure module according to claim 21, wherein the secure software has a function of decoding encrypted MPEG data.

40. (CURRENTLY AMENDED) A recording medium that records a program for causing a hardware secure module mounted to an information reproducing apparatus to execute a process, the process comprising:

reading secure software stored in a memory using a direct access method and without using an operating system, by the hardware secure module having a tamper resistant module structure inaccessible from outside that stores information related to the secure software;

storing an updated secure software in an unswappable area of the memory using a direct access method;

checking falsification by comparing the secure software read at the reading with the information related to the secure software stored in the hardware secure module, and determining a falsification of the secure software based on a result of the comparison; and

executing the secure software when the result of the comparison is that the secure software is not falsified, and

wherein the storing includes instructing, using the direct access method, the executing to change over from the secure software executed to the updated secure software stored in the unswappable area of the memory and to execute the updated secure software.

41. (CURRENTLY AMENDED) A method of a reproducing verified information, comprising:

executing a secure software that is stored in a memory accessible to an information reproducing apparatus using a direct access method, when comparison of the secure software read by direct access method with information related to the secure software stored in a hardware secure module having a tamper resistant module structure inaccessible from outside, indicates that the secure software is not falsified; and

storing an updated secure software in an unswappable area of the memory using a direct access method; and

wherein the storing includes instructing, using the direct access method, the executing to change over from the secure software executed to the updated secure software stored in the

Serial No. 10/629,853

unswappable area of the memory and to execute the updated secure software.